



Dulles Corridor Special Study Potential Mitigation Measures

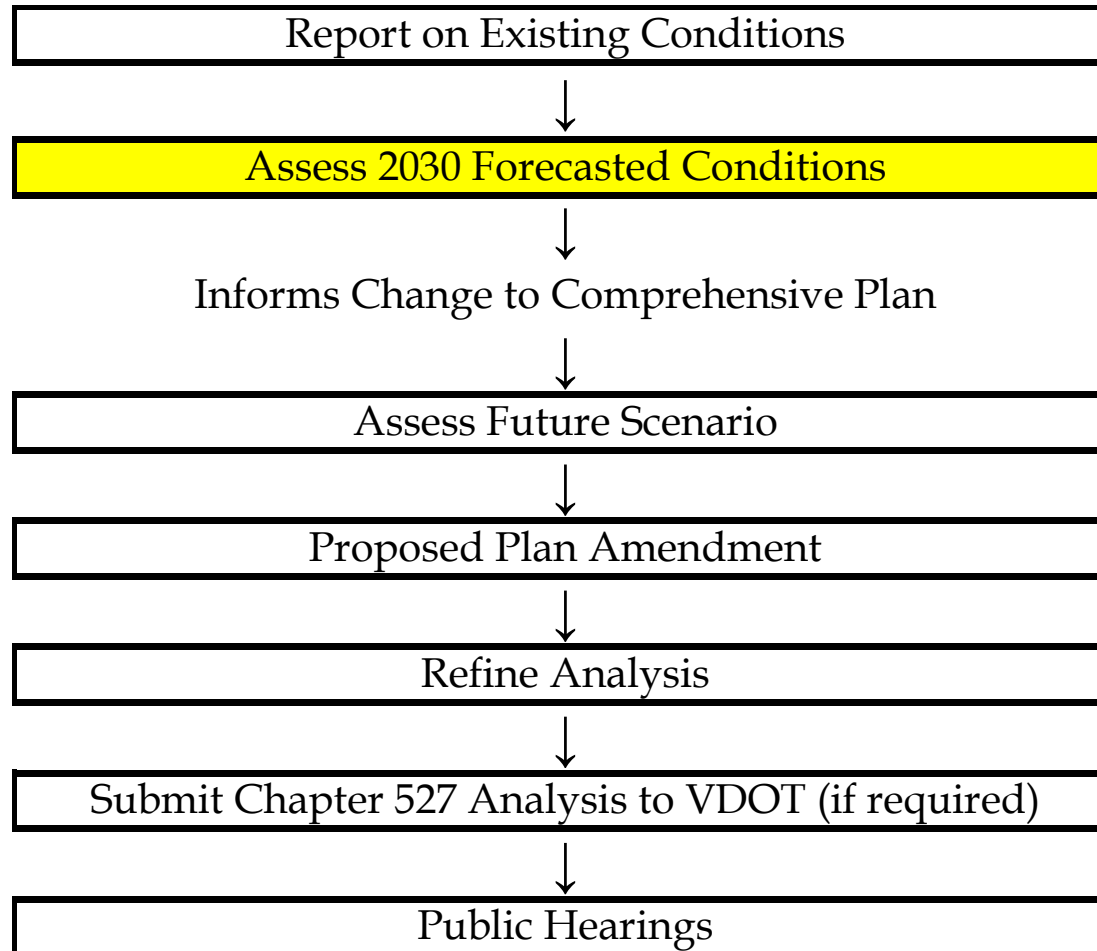
Presented to:
Reston Master Plan Special Study Task Force

Presented by:
Fairfax County Department of Transportation

December 14, 2010



TRANSPORTATION ANALYSIS PROCESS



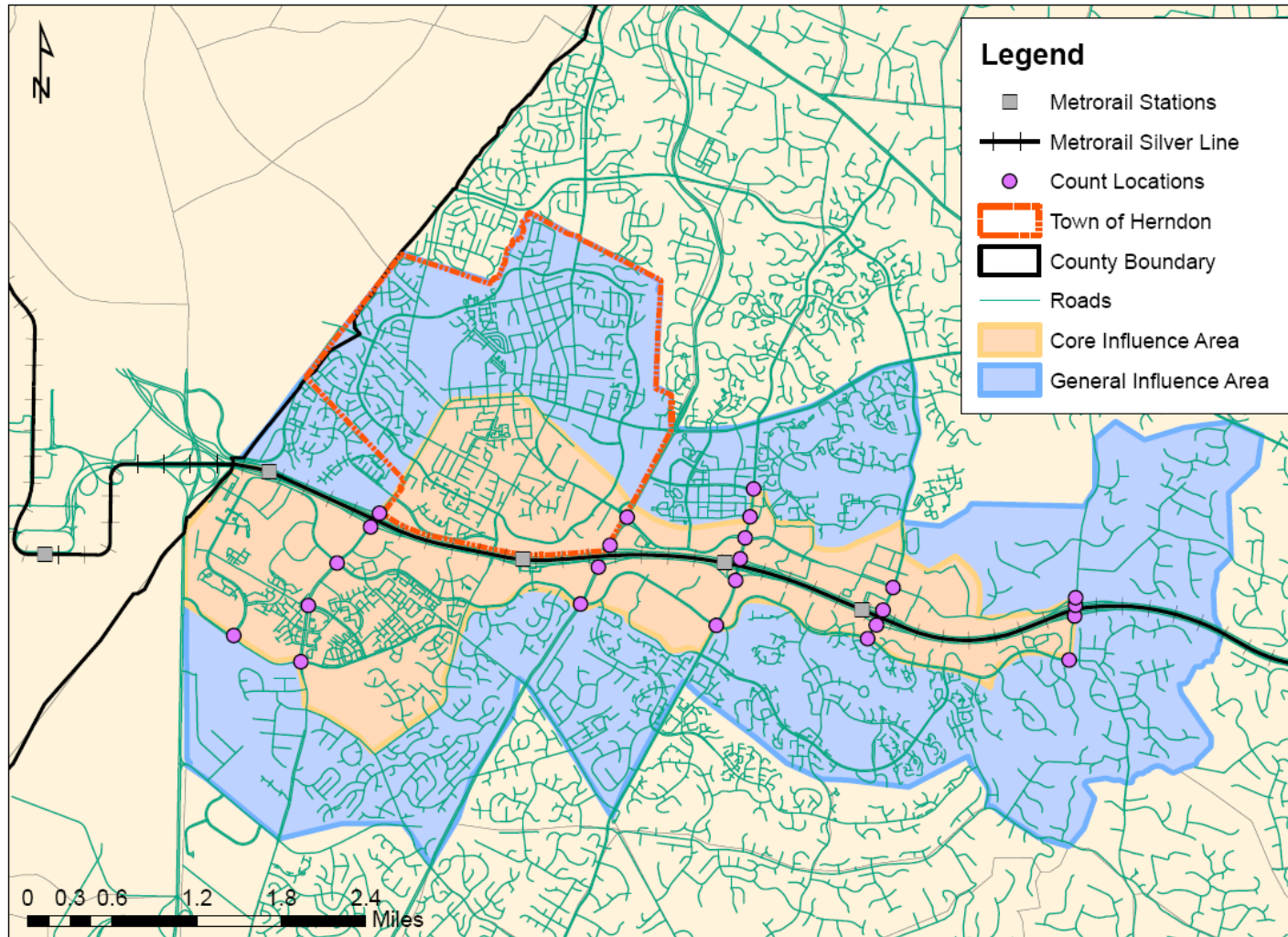


What is the Model?

- Travel Demand Forecasting Model
 - Tool Used by all MPO's in US
 - Regional Model used by MWCOC with County Enhancements
- Land Use is Divided into Zones (TAZ's)
- Supply of Transportation is represented by the highway and transit network
- Demand for Travel Developed Using a Series of Mathematical Models
- Provides information such as vehicle miles traveled (VMT) and mode choice/use



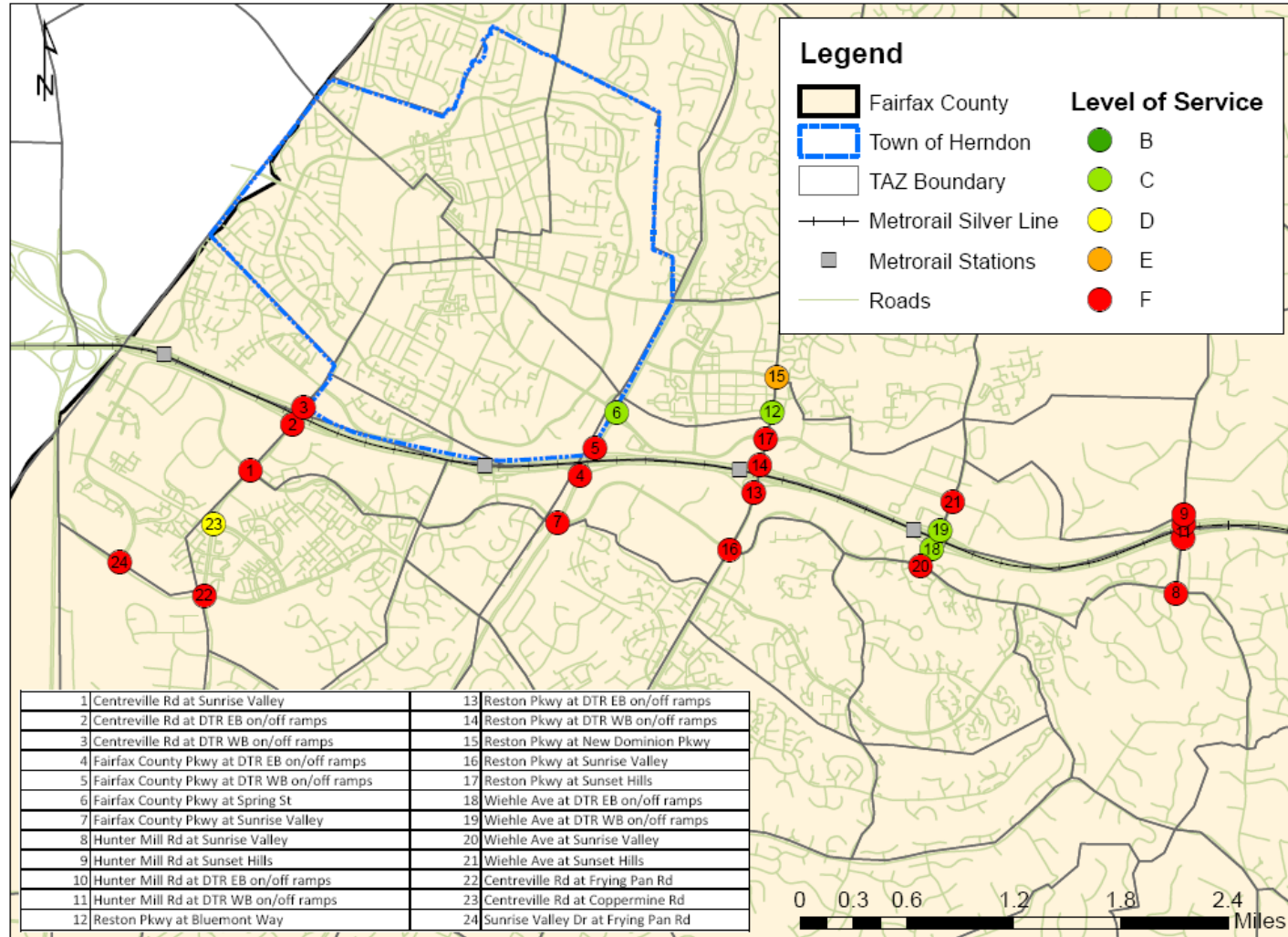
Study Area





County of Fairfax, Virginia

Future Evening Peak Hour Level of Service





General Mitigation Strategies

- Strategic Land Use (TOD)
 - Mixed –Use, Location, Type
- Local Connections
- Enhanced Pedestrian and Bicycle Paths
- Increase Use of Transit
- Enhanced TDM
- Traffic Operations
- Intersection Improvements



- Potential Mitigation Strategies By Location
 - Selected Problem Intersections Examined
 - Mitigation Measures Suggested for Future Consideration and Evaluation
 - Suggested Mitigation Measures Have Not Been Evaluated



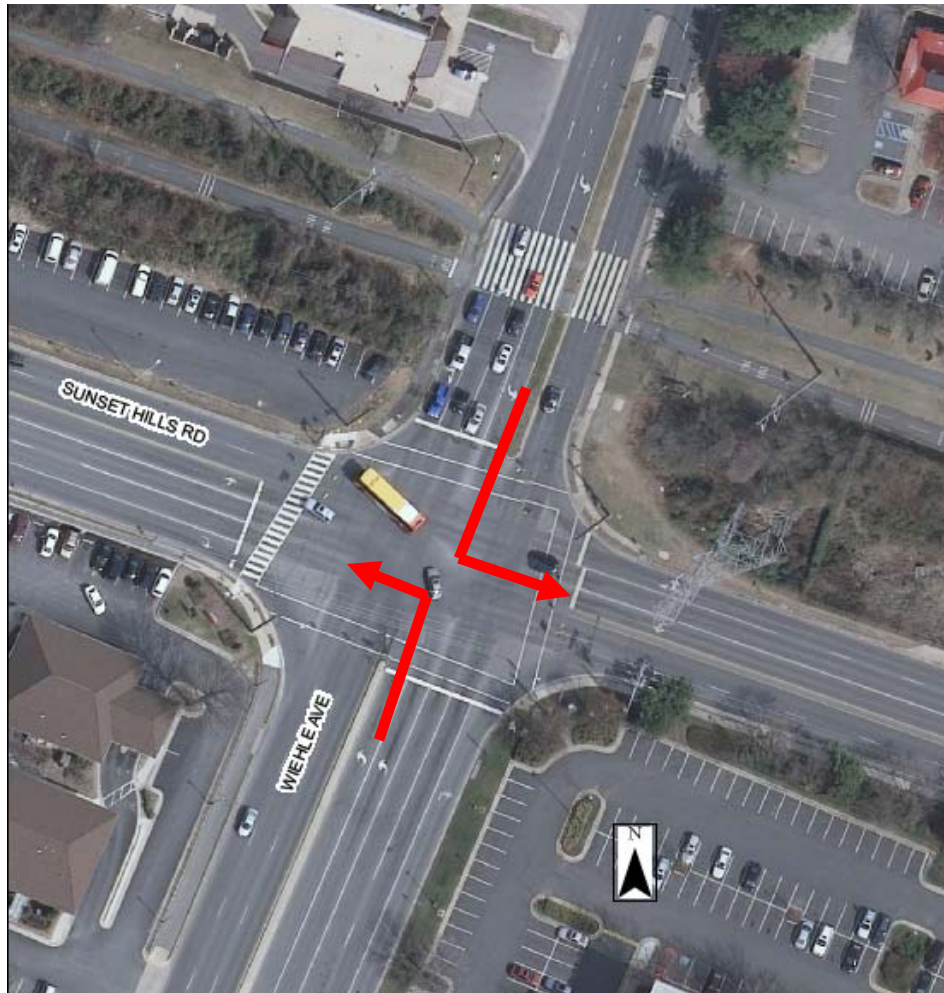
Intersection Analysis

Abbreviation Terminologies:

- LOS – Level of Service
- SOD – Seconds of Delay
- NB – Northbound direction approaching the intersection
- SB – Southbound direction approaching the intersection
- WB – Westbound direction approaching the intersection
- EB – Eastbound direction approaching the intersection



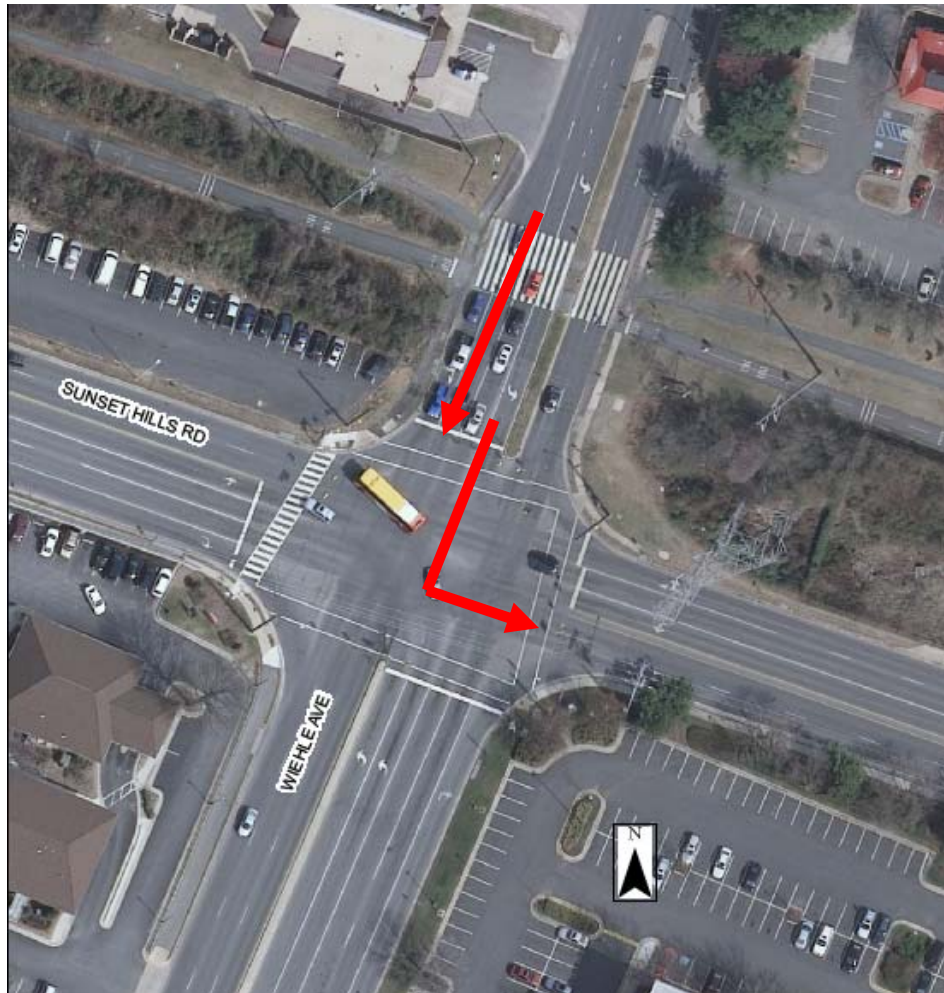
Wiehle Avenue and Sunset Hills Road



- Existing AM LOS D (45 sod)
 - SB left turn
 - NB left turn



Wiehle Avenue and Sunset Hills Road



- Existing AM LOS D (45 sod)
 - SB left turn
 - NB left turn
- Future AM LOS F (110 sod)
 - SB left turn
 - SB Wiehle Ave before the intersection



Wiehle Avenue and Sunset Hills Road



- Existing AM LOS D (45 sod)
 - SB left turn
 - NB left turn
- Future AM LOS F (110 sod)
 - SB left turn
 - SB Wiehle Ave before the intersection
- Existing PM LOS F (80 sod)
 - WB left turn
 - EB right turn



Wiehle Avenue and Sunset Hills Road



- Existing AM LOS D (45 sod)
 - SB left turn
 - NB left turn
- Future AM LOS F (110 sod)
 - SB left turn
 - SB Wiehle Ave before the intersection

- Existing PM LOS F (80 sod)
 - WB left turn
 - EB right turn
- Future PM LOS F (280 sod)
 - WB left turn
 - EB right turn



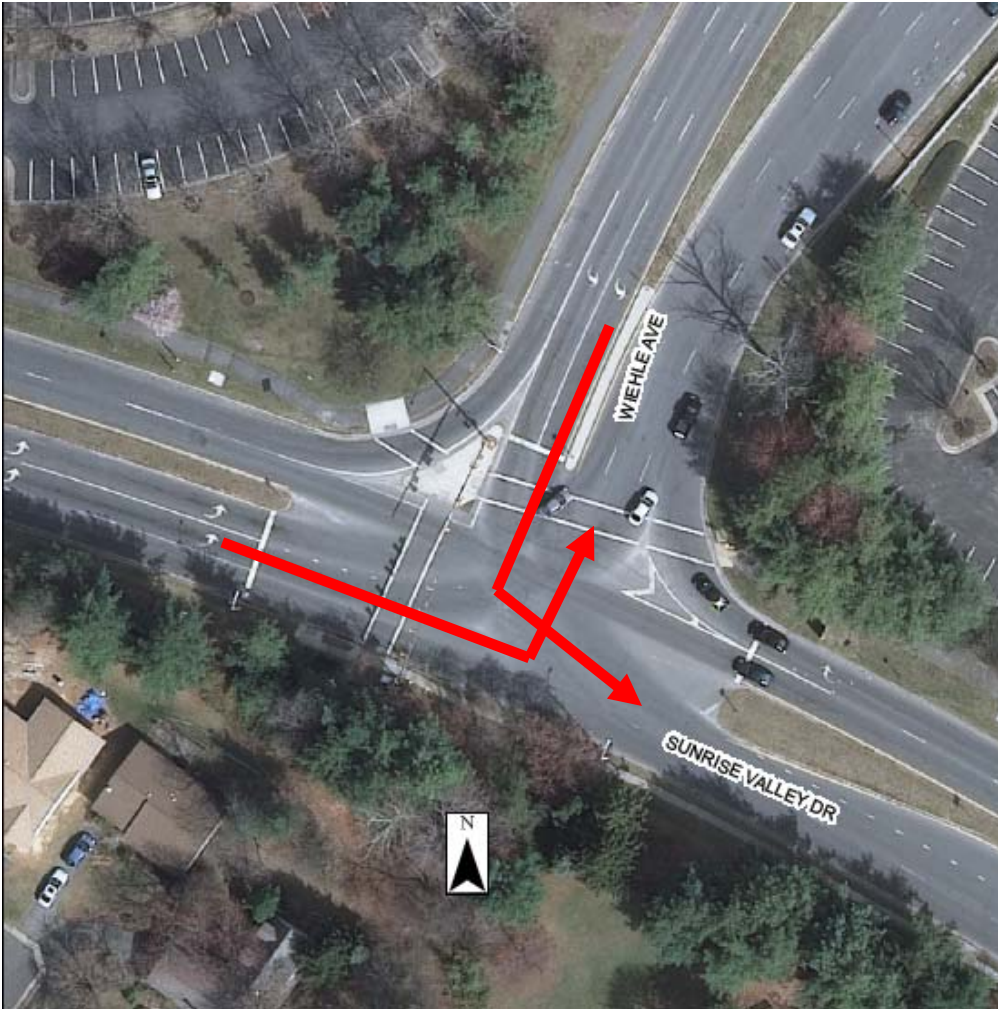
Wiehle Avenue and Sunset Hills Road

- Potential Mitigation Measures to Consider:
 - Add local north-south connection through Isaac Newton Square
 - Build Soapstone Extension across Dulles Toll Road (Comp Plan)
 - Improve EB Sunset Hills right turn lane (RMAG)
 - Dedicated bus lane on Sunset Hills (RMAG)
 - Add dual left turn lanes on WB Sunset Hills Road
 - Add dual left turn lanes on SB Wiehle Avenue



Wiehle Avenue and Sunrise Valley Drive

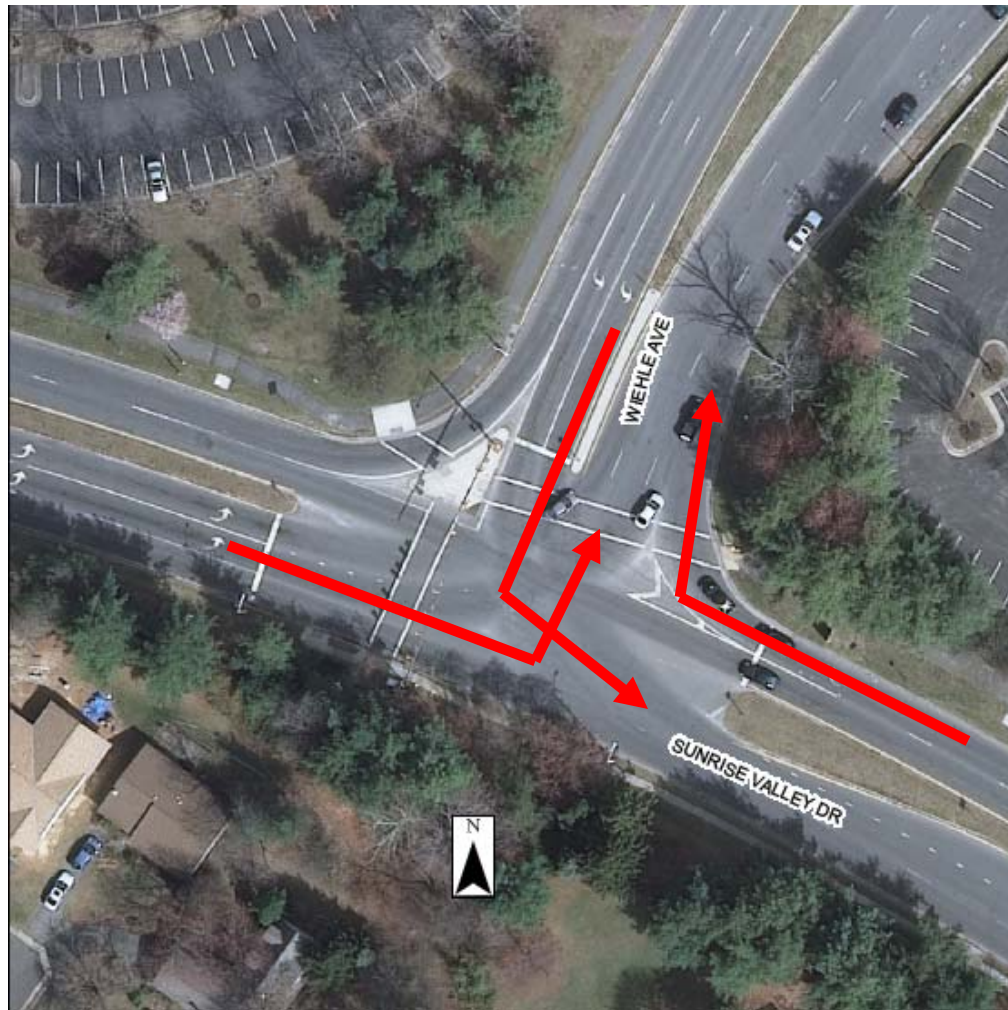
- Existing AM LOS D (40 sod)
 - EB left turn
 - SB left turn





Wiehle Avenue and Sunrise Valley Drive

- Existing AM LOS D (40 sod)
 - EB left turn
 - SB left turn
- Future AM LOS F (100 sod)
 - EB left turn
 - SB left turn
 - WB right turn





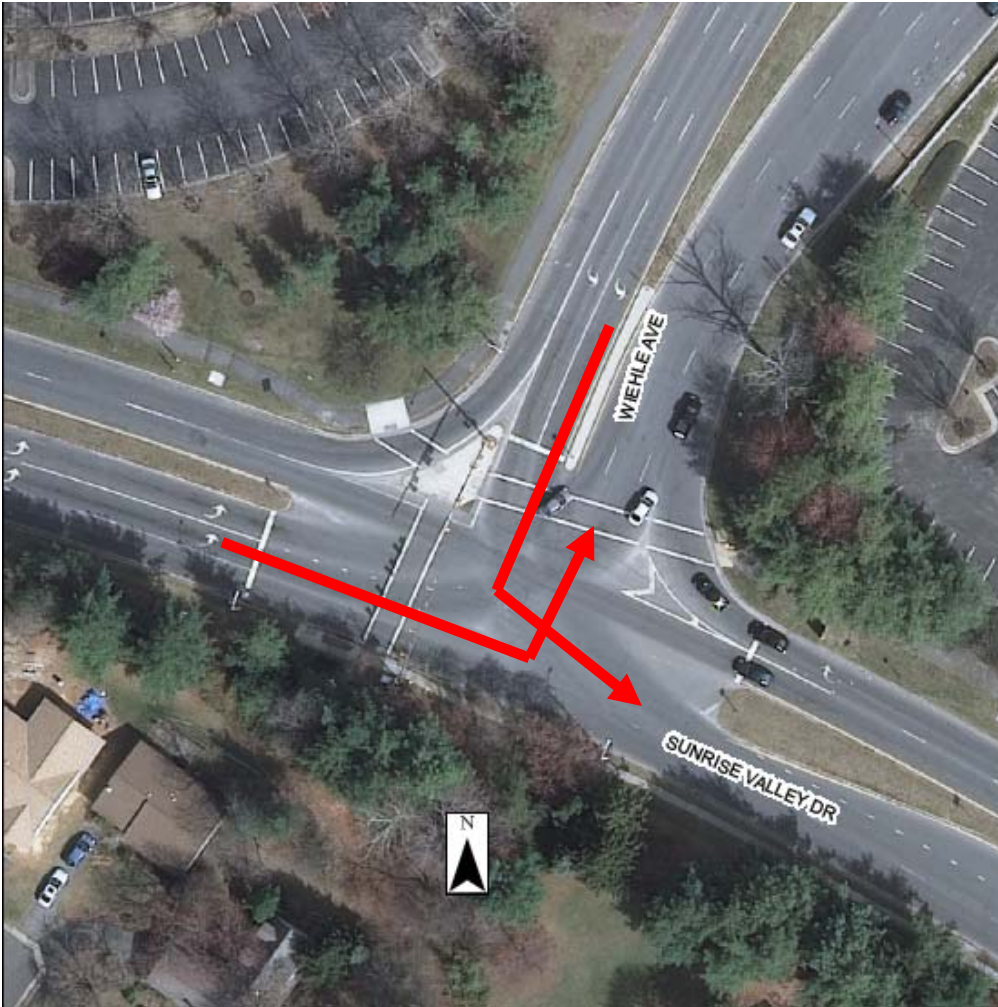
Wiehle Avenue and Sunrise Valley Drive



- Existing AM LOS D (40 sod)
 - EB left turn
 - SB left turn
- Future AM LOS F (100 sod)
 - EB left turn
 - SB left turn
 - WB right turn
- Existing PM LOS C (30 sod)
 - SB left turn



Wiehle Avenue and Sunrise Valley Drive



- Existing AM LOS D (40 sod)
 - EB left turn
 - SB left turn
- Future AM LOS F (100 sod)
 - EB left turn
 - SB left turn
 - WB right turn
- Existing PM LOS C (30 sod)
 - SB left turn
- Future PM LOS D (50 sod)
 - SB left turn
 - EB left turn



Wiehle Avenue and Sunrise Valley Drive

- Potential Mitigation Measures to Consider:
 - Improve WB Sunrise Valley Drive right turn lane (RMAG)
 - Build Soapstone Extension across Dulles Toll Road (Comp Plan)
 - Add channelization to avoid turning conflicts



Reston Parkway and Sunset Hills Road



- Existing AM LOS F (90 sod)
 - NB left turn
 - NB right turn



Reston Parkway and Sunset Hills Road



- Existing AM LOS F (90 sod)
 - NB left turn
 - NB right turn
- Future AM LOS F (190 sod)
 - NB right turn
 - NB left turn and WB left turn



Reston Parkway and Sunset Hills Road



- Existing AM LOS F (90 sod)
 - NB left turn
 - NB right turn
- Future AM LOS F (190 sod)
 - NB right turn
 - NB left turn and WB left turn
- Existing PM LOS F (110 sod)
 - WB left turn



Reston Parkway and Sunset Hills Road



- Existing AM LOS F (90 sod)
 - NB left turn
 - NB right turn
- Future AM LOS F (190 sod)
 - NB right turn
 - NB left turn and WB left turn
- Existing PM LOS F (110 sod)
 - WB left turn
- **Future PM LOS F (240 sod)**
 - **WB left turn**
- Overall there are heavy volumes for all turning movements and through lanes



Reston Parkway and Sunset Hills Road

- Potential Mitigation Measures to Consider:
 - Town Center Parkway extension under DTR (Comp Plan and RMAG)
 - Grade separate through movements on Reston Parkway
 - Shrink intersection to improve pedestrian crossings



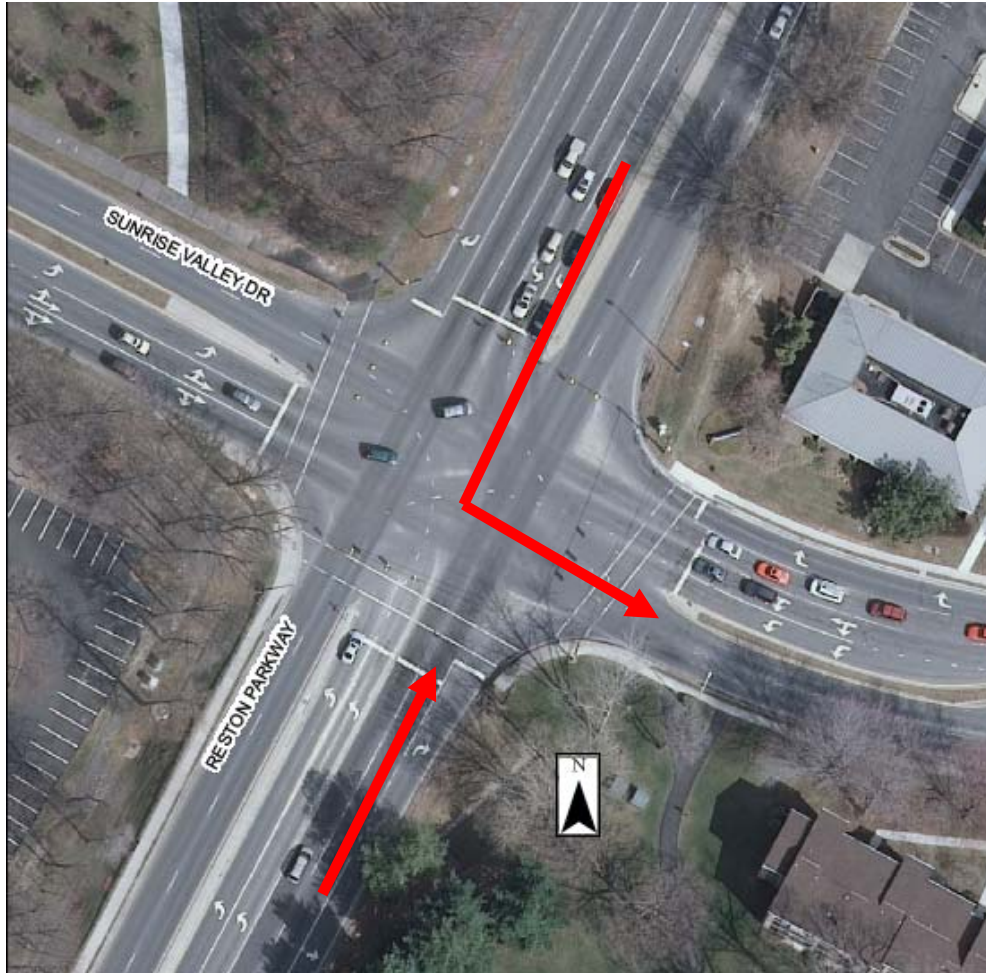
Reston Parkway and Sunrise Valley Drive



- Existing AM LOS E (60 sod)
 - SB left turn



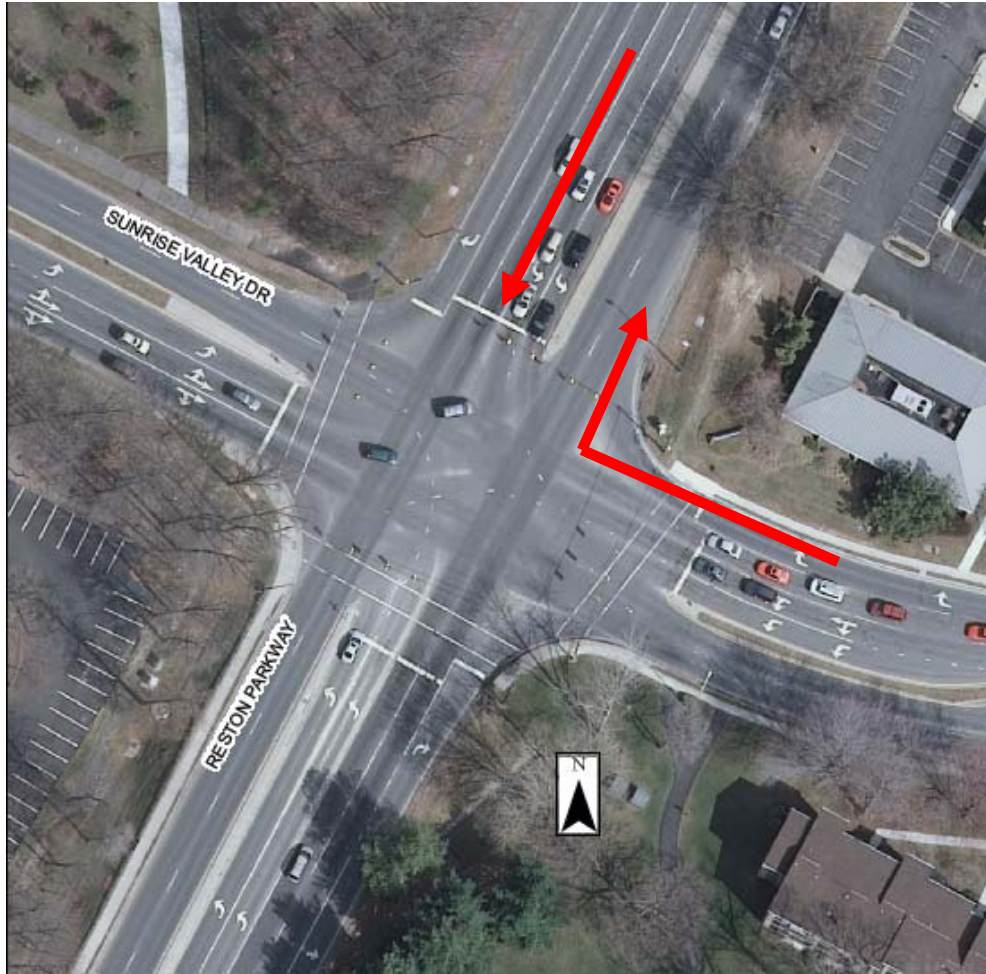
Reston Parkway and Sunrise Valley Drive



- Existing AM LOS E (60 sod)
 - SB left turn
- Future AM LOS F (110 sod)
 - SB left turn
 - NB Reston Pkwy through



Reston Parkway and Sunrise Valley Drive



- Existing AM LOS E (60 sod)
 - SB left turn
- Future AM LOS F (110 sod)
 - SB left turn
 - NB Reston Pkwy through
- Existing PM LOS E (79 sod)
 - SB Reston Pkwy through
 - WB right turn



Reston Parkway and Sunrise Valley Drive



- Existing AM LOS E (60 sod)
 - SB left turn
- Future AM LOS F (110 sod)
 - SB left turn
 - NB Reston Pkwy through
- Existing PM LOS E (79 sod)
 - SB Reston Pkwy through
 - WB right turn
- Future PM LOS F (150 sod)
 - SB Reston Pkwy through
 - WB right turn

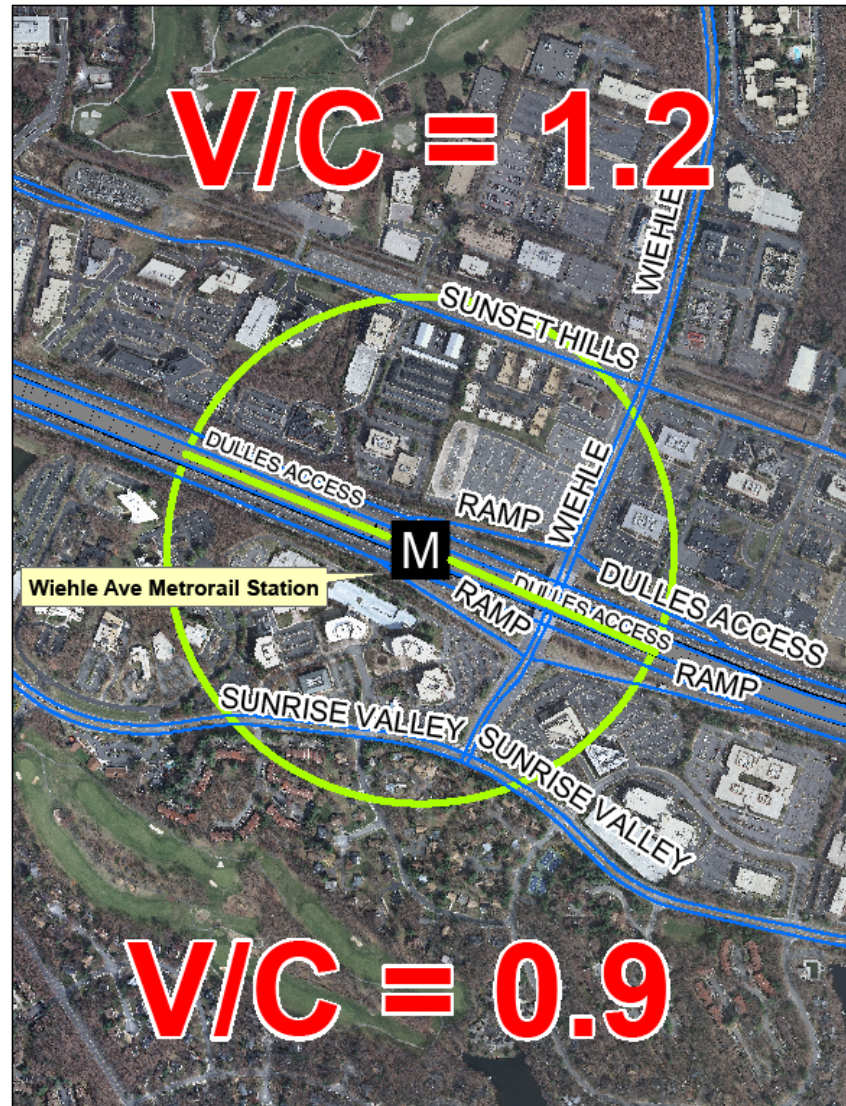


Reston Parkway and Sunrise Valley Drive

- Potential Mitigation Measures to Consider:
 - Town Center Parkway extension under DTR (Comp Plan and RMAG)
 - Improve SB Reston Parkway right turn lane (RMAG)
 - Add third lane on Reston Parkway (per Comp Plan north of Sunrise Valley Drive)



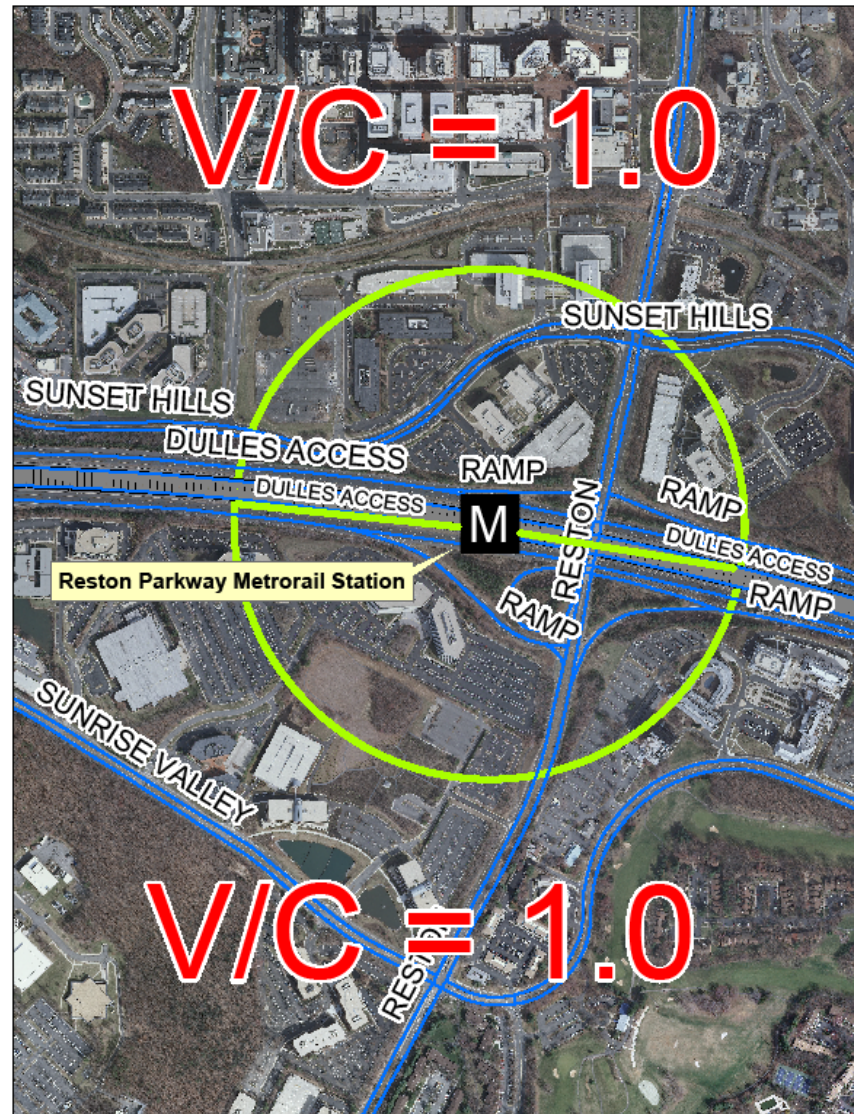
Wiehle Avenue Station Cordon Analysis Results





County of Fairfax, Virginia

Reston Parkway Station Cordon Analysis Results





General Mitigation Strategies

- Strategic Land Use (TOD)
 - Mixed –Use, Location, Type
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- Enhanced Pedestrian and Bicycle Paths
- Increase Use of Transit
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Questions/Discussion